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Subject:  
GE Aviation – Altitude Test Facility  
Data Summary of Tenth Air Sampling Event – May 2014

ENVIRONMENT

Dear PCB Coordinator:

Date:  
June 19, 2014

On May 21, 2014, GE Aviation, an operating division of the General Electric Company (GE), performed indoor air testing activities at the Altitude Test Facility (ATF) at GE's facility in Evendale, Ohio, in accordance with EPA's January 16, 2014 amendment to EPA's December 19, 2012 approval allowing GE to use the ATF for jet engine testing pursuant to 40 CFR § 761.62(c). This report is being submitted pursuant to Consent Agreement and Final Order (TSCA-05-2014-0008) filed on April 28, 2014.

GE collected two indoor air samples at the ATF on May 21, 2014, prior to conducting jet engine testing in June 2014 and received the laboratory report containing the results on June 9, 2014. One sample was "Non-Detect" for PCBs, and the second sample had low but detectable results for PCBs, estimated at 123.9 nanograms per cubic meter (ng/m<sup>3</sup>), well below the NIOSH standard of 1,000 ng/m<sup>3</sup>. Further details for the sampling event follow in the report and **Table 1**.

Air test sample ATF-AR-C44-05, located adjacent to the #44 Test Cell Chamber of the ATF, and air test sample ATF-AR-CR2-10, located on the second floor of the compressor room, were both collected over an 8-hour interval. The samples were collected on May 21, 2014, during routine facility maintenance, prior to conducting jet engine testing activities. Both air pumps were placed in a manner such that the air sample would be collected from the breathing zone, in the room where employees were performing work tasks. Both air pumps used for this event were programmed for a flow rate of 5.0 L/minute for a total run time of eight hours. Calibration and preparation of air samples followed Method TO-10A: Compendium of Methods for Toxic Organic Air Pollution. During the sampling event, a total volume of 2,400 Liters was pumped through each sample collection media.

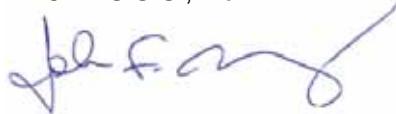


The laboratory analytical results of the sampling event are provided in the Data Summary Table, attached as **Table 1** and the sampling locations are provided on the attached **Figure 1**. As indicated in the attachments, sample ATF-AR-C44-05 (collected adjacent to Test Cell #44) had “non-detect” levels of PCBs ng/m<sup>3</sup>, and sample ATF-AR-CR2-10 (collected from the ATF compressor room) had detected PCBs of 123.9 ng/m<sup>3</sup>. The laboratory quantitation limit (PQL) for these results was 41.7 ng/m<sup>3</sup>, with a final extraction volume of 5.0 mL. The specific operating parameters of the analytical instruments used by PACE Analytical during sample analysis are detailed in **Attachment 1**.

Please do not hesitate to contact John Rumpf, Counsel for Environmental Affairs at GE Aviation, at (513) 243-4256 or Christopher Bell at Greenberg Traurig LLP at (713) 374-3556 if you have any questions.

Sincerely,

ARCADIS U.S., Inc.



John F. Novotny, PE  
Senior Engineer

Attachments

Table 1

Figure 1

Attachment 1

Copies:

John Rumpf, GE

Christopher Bell, Greenberg Traurig, LLP





**Table 1**



**Table 1**  
**Data Summary - PCB Air Monitoring - May 2014**

**GE - Aviation - Altitude Test Facility**  
**Cincinnati, Ohio**

Sampling ID	Date Collected	Time Collected	Sample Type	Total PCBs (ng/m <sup>3</sup> )	Location Description
<b>Event 10</b>					
ATF-AR-C44-05	5/21/2014	16:05	Air	ND	Test Cell 44 open floor area
ATF-AR-CR2-10	5/24/2014	16:05	Air	123.9	Second floor of ATF Compressor Room

Notes:

1. Samples collected by ARCADIS personnel and submitted to Pace Analytical Laboratory for analysis using USEPA Compendium Method TO-10A procedures.
2. Air pumps were set up at breathing zone height and operated over an 8-hour interval at an air intake rate of approximately 5 L/min, resulting in approximately 2,400 L of air pulled through the puff for each sample.
3. Event 10 took place at the ATF on May 21, 2014 prior to the conducting engine testing in June 2014.
4. Total PCBs - the sum of aroclors 1016 through 1268
5. The final extraction volume of 5.0 mL was conducted by the laboratory.
6. The initial injection volume of 1µL was conducted by the laboratory.
7. the Laboratory determined no sample breakthrough occurred on all sample media.
8. ND (Non-Detect) - Denotes analyte not detected at a concentration greater than the PQL
9. PQL (Practical Quantitation Limit) of 41.7 ng/m<sup>3</sup> per aroclor. Denotes lowest analyte concentration reportable for the sample.
10. Time Collected, denotes the time which the air pumps completed the 8-hour run interval.

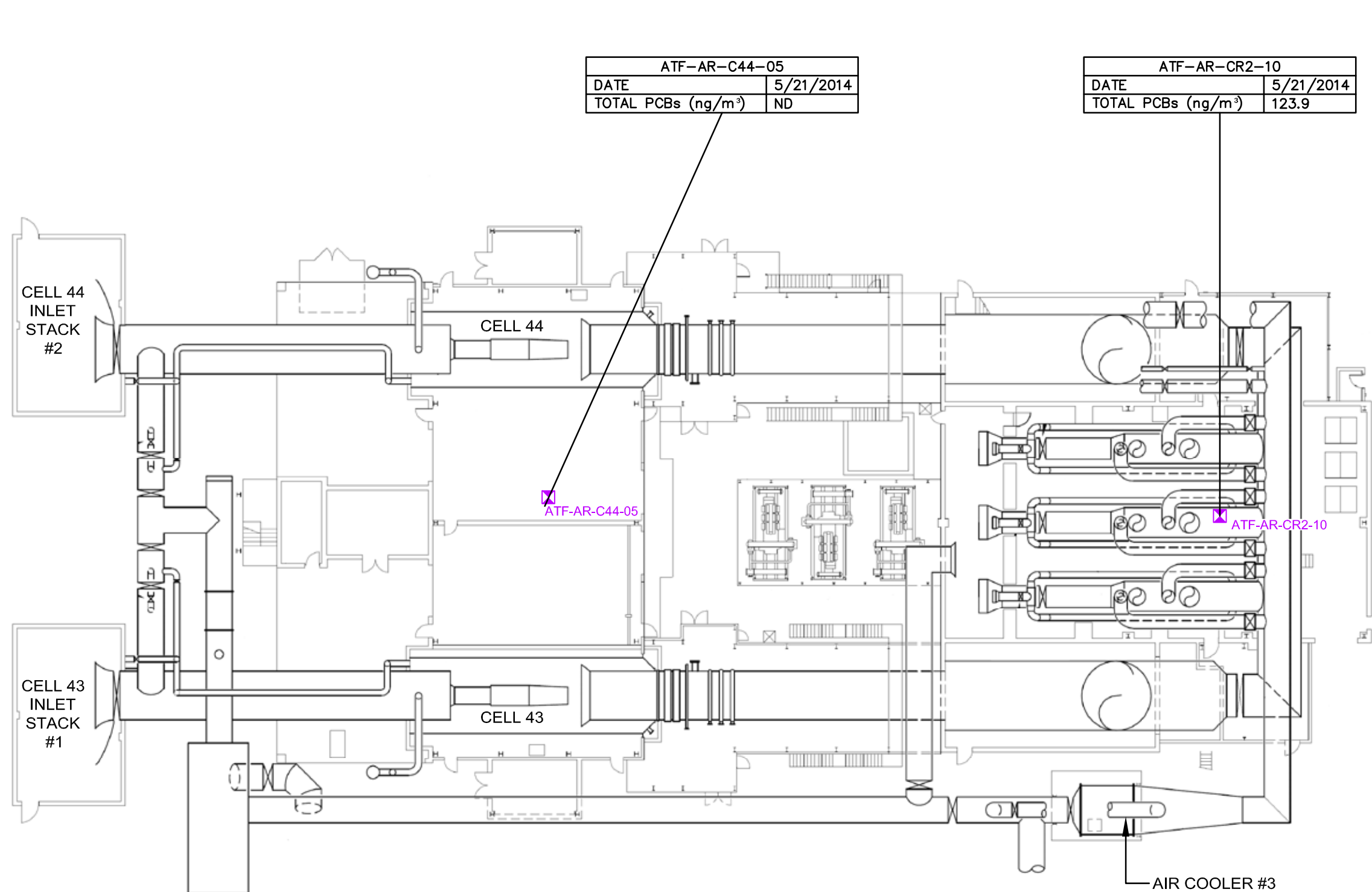
Abbreviations:

ATF - Altitude Test Facility  
AR - PCB air sample  
C44 - Test Cell #44  
CR2 - compressor room-second floor  
PCBs - polychlorinated biphenyls  
ng/m<sup>3</sup> - nanograms per cubic meter



**Figure 1**





NOT TO SCALE

**LEGEND:**

- 
- AMBIENT PCB AIR
- 
- MONITORING LOCATION

**SAMPLING NOMENCLATURE:**

ATF - ALTITUDE TEST FACILITY  
AR - PCB AIR SAMPLE  
C44 - TEST CELL #44  
CR2 - COMPRESSOR ROOM SECOND FLOOR

NOTES:

1. SAMPLING LOCATIONS ARE APPROXIMATE.
2. ng/m<sup>3</sup> - NANOGRAMS PER CUBIC METER
3. TOTAL PCBs - THE SUM OF AROCLORS 1016 THROUGH 1268.

GE-AVIATION  
CINCINNATI, OHIO  
**AIR TEST SUMMARY REPORT**

### DATA SUMMARY - PCB RESULTS AMBIENT PCB AIR MONITORING



FIGURE 1





**Attachment 1**



GC #: **GC-21 8082 High Level Method HYDROGEN**  
 Method: **Method 3**  
 Column: **GC21F ZB-1MS 20M 0.18mm 0.18um**  
**GC21B ZB-5 20M 0.18mm 0.18um**  
 Date: 2/15/2013  
 Analyst: JKA  
 File Name: S:\Lims Data\1405\14050585\EDD\[GC21\_Parameters\_1.xls]8082 H2 HL

**Sample Delivery:** SEE LEAP PARAMETERS

**Column Oven:**

Step	Temp (°C)	Rate (°C/min)	Hold (min)	Total (min)
Initial	150	-----	1.41	1.41
1	290	17.5	0.65	10.06

Stabilization Time (min): 0.50

**Injector: Front CP-1177**

1177 Oven Power: ON  
 1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	35

**Flow/PSI(Front EFC, Type 1):**

Carrier Gas : Helium

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*	-----	10	10

Constant Flow Mode Enable: NO  
 Column Flow Rate (ml/min): 2.3

**Detector:** Front ECD

**Injector: Middle CP-1177**

1177 Oven Power: ON  
 1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	35

**Flow/PSI(Front EFC, Type 1):**

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*	-----	10	10

Constant Flow Mode Enable: NO  
 Column Flow Rate (ml/min): 2.6

**Middle ECD**



ECD Oven Power: ON  
 Temperature (°C) 300  
 Electronics: ON  
 Range: 1

Time	Range	Autozero
Initial	1	YES

Front ECD Adjustment

Time Constant: Fast  
 Cell Current: CAP  
 Contact Potential (mV): \*

ECD Oven Power: ON  
 Temperature (°C) 300  
 Electronics: ON  
 Range: 1

Time	Range	Autozero
Initial	1	YES

Fast  
 CAP  
 \*

**\*values may change with use**

#### Front ECD Adjustments

Make-up Flow (mL/min) 30

#### Middle ECD Adjustments

Make-up Flow (mL/min) 35

#### Analog Output

Detectors: Front: ECD Attenuation 1  
 Middle: ECD Attenuation 1  
 Rear: None

Time	Signal Source	Attenuation
Initial	Front Detector	1
Time	Signal Source	Attenuation
Initial	Middle Detector	1
Time	Signal Source	Attenuation
Initial	Rear Detector	1

#### Valve Table:

Time	1	2	3	4	5	6	7
	None	None	None	None	None	None	None
Initial	----	----	----	----	----	----	----



Initial valve state=Off